

THE OFFICE ACTION OF 16 AUGUST 2002

In the Office Action of 16 August 2002, the Examiner withdrew the 35 USC §103 rejections over McLaren and Will, in view of the applicants prior arguments. The Examiner has withdrawn the 35 USC §112 rejection of the claims in view of applicant's prior amendment. The only issue remaining is the rejection of claims 1-26 as obvious over Tao under 35 USC §103.

THE §103 REJECTION Over Tao

The Examiner bears the burden of establishing a *prima facie* case of obviousness based upon the cited prior art. *In re Fritch*, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). Applicant respectfully submits that the Examiner has not met her burden in this case.

The Examiner's rejection of all the claims of this application as obvious in view of Tao was improper because Tao does not teach the invention claimed by applicants.

It is beyond dispute that Tao teaches a candle having a composition which is "...up to about 49% by weight of the petroleum wax...". [Tao, Col. 1, line 63]. Accordingly, it was improper for the Examiner to reject claims 10, 11, and 18, all of which claim a composition in which the paraffin wax exceeds 50%. Applicant has now amended independent claim 1 to require greater than 50% paraffin by weight, conforms the language of claim 9 to this change, and respectfully submits that claims 1-12, as amended, and claim 18, are fully distinguishable from and allowable over, Tao.

It is also beyond dispute that Tao does not teach, suggest, or mention (a) using fatty materials having low Iodine Values (IV), or (b) how to create a candle which is substantially non-sooting. Applicant respectfully submits that the remaining claims fully distinguish the Tao reference because they all require, in combination with paraffin, a fatty material having a low Iodine value in sufficient quantity to substantially prevent the formation of soot when the candle is burned.

Tao's specification does not mention, disclose, suggest, or recognize that the IV of the fatty materials used in the candle composition is critically important in creating a candle which substantially eliminates soot. The Examiner has cited no other reference which makes this suggestion. Rather, the Examiner uses forbidden hindsight reconstruction in an attempt to map applicant's claims onto Tao. Indeed, the Examiner's unsupported conclusion that "fully

hydrogenated" means an IV = 0 is questionable. Applicant submits that it is unlikely that even the most optimal hydrogenation procedure could ever achieve a level where the IV would be equal to zero.

Tao does not teach that his triglycerides *must* be fully hydrogenated. Rather, Tao's teaching is that triglycerides can be used which are *either* partially *or* fully hydrogenated. [See, e.g., Tao, Col. 1, lines 59-60]. Tao does so because he understands that fully hydrogenated materials are more costly, and the only guidance he provides relates, not to soot reduction, but to production of a final candle composition which is a solid at the temperature at which the candle is used. [Tao, Col. 3, lines 3-6].

This express teaching of Tao -- which allows for the use of partially hydrogenated fatty materials -- teaches away from applicant's invention which requires the use of low-IV (substantially fully hydrogenated) materials only. Unlike Tao, independent claim 13 of the present invention requires a candle having fatty material with an IV of approximately 12.5 or less and present in an amount sufficient to substantially prevent the formation of soot when the candle is burned. Similarly, independent claim 19 requires a candle having fatty material with a IV not exceeding about 2 and present in an amount sufficient to substantially eliminate the formation of soot when the candle is burned.

So, it is clear that the Examiner's rejection of the present claims rest upon unsupported speculation ("Regarding the formation of soot, it would be *reasonable to expect* that the candle composition of Tao meets this limitation...). No support whatsoever for this speculation is provided by the Examiner. The rules of the PTO require that a reference be supplied:

MPEP § 706.02(a) When a rejection is based on facts within the personal knowledge of the examiner, the data should be stated as specifically as possible, and the reference must be supported, when called for by the applicant, by an affidavit from the examiner . . . . Assertions of technical facts in areas of esoteric technology must always be supported by citation of some reference work.

*In re Ahlert*, 57 CCPA 1023, 165 USPQ 418 (1970). With no support, the Examiner's rejection cannot stand.


Indeed, the Examiner cannot provide support for this speculation. Tao never suggests his candle compositions eliminate soot. Indeed, he *admits* that soot and smoke are still produced, although he states "...soot and smoke formation was subjectively judged to be *lower*

when candles including a vegetable lipid-based composition were burned compared to paraffin wax-based candles under the same conditions." [Tao, Col. 5, lines 35-39]. Moreover, Tao does not suggest or disclose how soot can be substantially eliminated, quite simply because he did not appreciate what was required to achieve that end.

Applicant, on the other hand, and for the first time, provides a disclosure which enables those skilled in the art to produce candle compositions which include paraffin and which are substantially non-sooting. Accordingly, applicant submits that the requirement in claims 13-17 and 19-26 that the fatty material with the required low IV be present in an amount sufficient to substantially eliminate the formation of soot fully distinguishes the Tao reference.

In view of the above, applicants respectfully submit that all the claims presently in the application, are distinct from and allowable over the art of record and allowance is earnestly solicited. The Examiner is invited to call the undersigned in the event any further obstacles to allowance remain.

Respectfully submitted,  
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**APPENDIX 1**  
**MARKED-UP VERSION OF REWRITTEN, ADDED, AND/OR CANCELLED**  
**TEXT PURSUANT TO 37 C.F.R. §1.121 (b)**

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CLAIMS

1. (Twice Amended) A candle comprised ~~at least in part of~~ of greater than 50% by weight of paraffin and in combination with fatty material including hydrogenated triglycerides, wherein said fatty material has an Iodine Value of approximately 12.5 or less and is present in an amount sufficient to substantially prevent the formation of soot when the candle is burned.

2. The candle of claim 1, wherein said fatty material comprises at least approximately 15% by weight of said candle.

3. The candle of claim 1, wherein said fatty material has an Iodine Value of approximately 10 or less.

4. The candle of claim 1, wherein said fatty material has an Iodine Value of approximately 5 or less.

5. The candle of claim 1, wherein said fatty material has an Iodine Value of approximately 3 or less.

6. The candle of claim 1, wherein said fatty material has an Iodine Value of approximately 1 or less.

7. The candle of claim 1, wherein said fatty material further comprises free fatty acids.

8. The candle of claim 7, wherein said free fatty acids are at least in part plant source free fatty acids.

9. (Once Amended) The candle of claim 7, wherein said free fatty acids comprise ~~up to~~ less than approximately 50% by weight of said candle.

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10. The candle of claim 1, including at least approximately 60% by weight paraffin.
11. The candle of claim 1, including at least approximately 70% by weight paraffin.
12. The candle of claim 1, wherein said triglycerides are at least in part plant source triglycerides.
13. A candle comprised at least in part of paraffin and fatty material including triglycerides and free fatty acids, said fatty material having an Iodine Value of approximately 12.5 or less and present in an amount sufficient to substantially prevent the formation of soot when said candle is burned..
14. The candle of claim 13, wherein the fatty material has an Iodine Value of approximately 8 or less.
15. The candle of claim 13, wherein the fatty material has an Iodine Value of approximately 3 or less.
16. The candle of claim 14, including at least approximately 60% by weight paraffin.
17. The candle of claim 13, wherein said triglycerides and said free fatty acid are at least in part plant sourced.
18. A candle comprised of greater than 51% by weight paraffin and including triglyceride material having an Iodine Value of less than 12.5 and present in an amount sufficient to substantially eliminate the formation of soot when the candle is burned.

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19. A candle comprised of paraffin and free fatty acids, said free fatty acids having an Iodine Value not exceeding about 2 and present in an amount sufficient to substantially eliminate the formation of soot when the candle is burned.

20. The candle of claim 19, wherein said free fatty acids have an iodine value of approximately 1 or less.

21. The candle of claim 19, wherein said free fatty acids have an iodine value of approximately 0.8 or less.

22. The candle of claim 19, wherein said free fatty acids have an iodine value of approximately 0.5 or less.

23. The candle of claim 19, wherein said free fatty acids have an iodine value of approximately 0.3 or less.

24. The candle of claim 23, wherein said candle is comprised of at least about 15% by weight of said free fatty acids.

25. The candle of claim 19, wherein said candle is comprised of at least about 30% by weight of said free fatty acids.

26. The candle of claim 19, additionally including one or more other components selected from the group consisting of: triglycerides having an IV of 2 or less, scents, colors, and wicks.